Study On Generation Capacity Of Small Hydropower Stations In Distribution Network

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Abstract: Small hydropower station, when producing power energy to power system through the distribution network, may lead to the change of the detected current in relay protection and the protection coverage. In this paper, IEEE7 based network is formed in the platform of PSCAD/EMTDC to analyze the effects of distribution network in current protection when a small hydropower station is linked in. The running of relay protection in Section I and II is simulated to obtain the difference of current variation of network with or without small hydropower station. Also the key parameters are calculated to point out the maximum generation capacity of the small hydropower station in case of reliable and sensitive current protection.

Keywords: Small hydropower station, current protection, generation capacity, PSCAD/EMTDC

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